

Bellwork: 9/12/12

You spent 195 minutes
on the phone.

AT&T charges you \$.08 per minute plus a monthly access fee of \$7.95. Last month you referred a friend to the company and in return you received a \$15 service credit on your bill this month. If your bill is \$8.55, how many minutes did you spend on the phone?

$$.08m + 7.95 - 15 = 8.55$$

$$.08m - 7.05 = 8.55$$

$$m = 195$$

$$\begin{array}{r} .08m = 15.60 \\ \hline .08 \end{array}$$

$$\frac{\angle 1}{2x} + \frac{\angle 2}{12x} + \frac{\angle 3}{16x} = 180$$

$$\frac{30x = 180}{30 \quad 30}$$

$$\angle 1 = 2(6) = 12 \quad x = 6$$

$$\angle 2 = 12(6) = 72$$

$$\angle 3 = 16(6) = 96$$

$$180$$

$$p = 8b - 560$$

$$\begin{array}{r} 720 = 8b - 560 \\ + 560 \qquad + 560 \\ \hline \end{array}$$

$$\begin{array}{r} 1280 = 8b \\ \hline 8 \qquad 8 \end{array}$$

$$\boxed{160 \text{ boats}}$$

$$6^{6.25}(x-3) - 2^{6.25}(x-2) = 11$$

$$6x - 18 - 2x + 4 = 11$$

$$4x - 14 = 11$$

$$+14 \quad +14$$

$$\frac{4x}{4} = \frac{25}{4}$$

$$x = 6.25$$

LITERAL EQUATIONS

Literal Equation is an equation that contains two or more variables.

Examples: Formulas from Geometry

Formula for volume of a cube:

$$V = s^3$$

Formula for area of a circle:

$$A = \pi r^2$$

Formula for volume of a square pyramid:

$$V = \frac{1}{3}s^2h$$

1.) Solve $\frac{a}{t} = \frac{V - V_0}{t}$ for V_0

$$(t)a = \frac{V - V_0}{t} (t)$$

$$at = V - V_0$$

$$\frac{at - V}{-1} = \frac{-V_0}{-1}$$

$$-at + V = V_0$$

2.) Solve $P = 2l + 2w$ for w

$$P = 2l + 2w$$

$$\frac{-2l \quad -2l}{-2l \quad -2l}$$

$$\frac{P - 2l}{2} = \frac{2w}{2}$$

$$\frac{P - 2l}{2} = w$$

3.) Solve $A = \frac{1}{2}h(b_1 + b_2)$ for b_2

$$(2) A = \cancel{2} \frac{1}{2} h (b_1 + b_2)$$

$$\frac{2A}{h} = \cancel{h} (b_1 + b_2)$$

$$\frac{2A}{h} = b_1 + b_2$$

$$\begin{array}{r} -b_1 \quad -b_1 \\ \hline \frac{2A}{h} - b_1 = b_2 \end{array}$$

4.) Solve $I = P(1+rt)$ for t

$$\frac{I = \cancel{P}(1+rt)}{P \quad \cancel{P}}$$

$$\frac{I}{P} = 1 + rt$$

$$\frac{I}{P} - 1 = \cancel{r}t$$

$$\frac{\frac{I}{P} - 1}{r} = t$$

5.) Solve $T = T_0 - a(z - z_0)$ for a

$$T = T_0 - a(z - z_0)$$

$$\frac{T - T_0}{(z - z_0)} = \frac{-a(z - z_0)}{(z - z_0)}$$

$$\frac{T - T_0}{(z - z_0)} = -a$$

$$\frac{T - T_0}{(z - z_0)} = -a$$

$$-\left(\frac{T - T_0}{(z - z_0)}\right) = a$$

6.) Solve $F = G \frac{mM}{r^2}$ for m

$$F = G \frac{mM}{r^2}$$

$$\frac{Fr^2}{GM} = \frac{GmM}{GM}$$

$$\frac{Fr^2}{GM} = m$$

7.) Solve $S = L - RL$ for L

8.) Solve $d = \frac{ax - bx}{c}$ for x

Homework: 9/12/12

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Quiz - Friday 9/14

- ① Add / Subtract / Multiply / Divide Fractions
- ② PEMDAS
- ③ Exponents
- ④ Solving Equations
- ⑤ Sometimes, Always, Never
- ⑥ Literal Equations
- ⑦ WORD PROBLEMS!